

IN THE CLAIMS

1. (Previously Presented) A method for transporting data, comprising:

encapsulating data in a frame, wherein the frame comprises a header section, a payload section, and a trailer section, and wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the payload section contains the data;

setting, responsive to the data, the Segment Type field and the Final Payload Count Valid field, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section;

transporting the frame through a communication system; and

extracting from the transported frame, responsive to the Segment Type field and the Final Payload Count Valid field, the data from the payload section.

2. (Previously Presented) The method for transporting data of claim 1, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field, and wherein extracting the data from the payload section is further responsive to the Final Payload Count field.

3. (Previously Presented) An apparatus for transporting data, comprising:

a packet switch operable to encapsulate means for encapsulating data in a frame, wherein the frame comprises a header section, a payload section, and a trailer section, and wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the payload section contains the data;

the packet switch operable to set means for setting, responsive to the data, the Segment Type field and the Final Payload Count Valid field, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section;

the packet switch operable to transport means for transporting the frame through a communication system; and

the packet switch operable to extract means for extracting from the transported frame, responsive to the Segment Type field and the Final Payload Count Valid field, the data from the payload section.

4. (Previously Presented) The apparatus for transporting data of claim 3, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field, and wherein extracting the data from the payload section is further responsive to the Final Payload Count field.

5. (Currently Amended) A computer-readable storage medium for organizing data for transport, the computer readable medium encoding a data structure comprising:

a frame comprising a header section, a payload section, and a trailer section;

wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the contents of the Segment Type field and the contents of the Final Payload Count Valid field are responsive to the contents of the payload section, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section.

6. (Currently Amended) The computer-readable storage medium for organizing data for transport of Claim 5, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field.

7. (Currently Amended) A transmission system, comprising:

a packet switch operable to generate means for generating a frame for transporting data packets in diverse formats, said frame comprising a header section, a payload section, and a trailer section; and

wherein the header section comprises a Segment Type field and a Final Payload Count Valid field, and wherein the contents of the Segment Type field and the contents of the Final Payload Count Valid field are responsive to the contents of the payload section, the Final Payload Count Valid field indicating whether or not the payload section includes a Final Payload Count field, the Final Payload Count field indicating an amount of data placed in the payload section.

8. (Previously Presented) The transmission system of Claim 7, wherein the contents of the payload section comprise, responsive to the Final Payload Count Valid field, the Final Payload Count field.

9. (Previously Presented) The method of transporting data of Claim 1, wherein the frame comprises a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section, and wherein the first header section comprises a First Service Type field and the second header section comprises a Second Service Type field, and wherein the first payload section contains a first portion of the data and the second payload section contains a second portion of the data, wherein the first and second payload sections carry data having different service types as identified by the First and Second Service Type fields;

the method further comprising:

setting, responsive to the first portion of the data, the First Service Type field;

setting, responsive to the second portion of the data, the Second Service Type field;

extracting from the transported frame, responsive to the First Service Type field, the first portion of the data from the first payload section; and

extracting from the transported frame, responsive to the Second Service Type field, the second portion of the data from the second payload section.

10. (Previously Presented) The apparatus for transporting data of Claim 3, wherein the frame comprises a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section, and wherein the first header section comprises a First Service Type field, and the second header section comprises a Second Service Type Field, and wherein the first payload section contains a first portion of the data, and the second payload section contains a second portion of the data, wherein the first and second payload sections carry data having different service types as identified by the First and Second Service Type fields;

the apparatus further comprising packet switch operable to:

set means for setting, responsive to the first portion of the data, the First Service Type field;

set means for setting, responsive to the second portion of the data, the Second Service Type field;

extract means for extracting from the transported frame, responsive to the First Service Type field, the first portion of the data from the first payload section; and

extract means for extracting from the transported frame, responsive to the Second Service Type field, the second portion of the data from the second payload section.

11. (Currently Amended) The computer readable storage medium for organizing data for transport of Claim 5, wherein the frame comprises a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section; and

wherein the first header section comprises a First Service Type field and the second header section comprises a Second Service Type field, the contents of the First Service Type field being responsive to the contents of the first payload section, and the contents of the Second Service Type field being responsive to the contents of the second payload section, the first and second payload sections carrying data having different service types as identified by the First and Second Service Type fields.

12. (Previously Presented) The transmission system of Claim 7, wherein the frame comprises a first header section and a first payload section associated with the first header section, a second header section and a second payload section associated with the second header section, and a trailer section; and

wherein the first header section comprises a First Service Type field and the second header section comprises a Second Service Type field, the contents of the First Service Type field being responsive to the contents of the first payload section and the contents of the Second Service Type field being responsive to the contents of the second payload section, the first and second payload sections carrying data having different service types as identified by the First and Second Service Type fields.

13. (Previously Presented) The method for transporting data of claim 1, wherein the Segment Type field indicates that the data is carried over multiple frames.

14. (Previously Presented) The apparatus for transporting data of claim 3, wherein the Segment Type field indicates that the data is carried over multiple frames.

15. (Currently Amended) The computer-readable storage medium for organizing data for transport of Claim 5, wherein the Segment Type field indicates that the data is carried over multiple frames.

16. (Previously Presented) The transmission system of Claim 7, wherein the Segment Type field indicates that the data is carried over multiple frames.

17. (Previously Presented) The method for transporting data of claim 1, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for transport.

18. (Previously Presented) The apparatus for transporting data of claim 3, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for transport.

19. (Currently Amended) The computer-readable storage medium for organizing data for transport of Claim 5, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for transport.

20. (Previously Presented) The transmission system of Claim 7, wherein the payload section includes the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data does not require the entire payload section for transport, the payload section not including the Final Payload Count field in response to the Segment Type field and the Final Payload Count Valid field indicating that the encapsulated data requires the entire payload section for transport.